### BEFORE THE

### STATE CORPORATION COMMISSION

### OF VIRGINIA

Application of	)
Verizon Virginia Inc.	) Case No. PUC-2007
and	)
Verizon South Inc.	
For a Determination that Retail Services Are	)
Competitive and Deregulating and Detariffing	)
of the Same	)

### WINCHESTER (WIN) EXHIBITS

**PUBLIC VERSION** 

### Winchester (WIN) Exhibits

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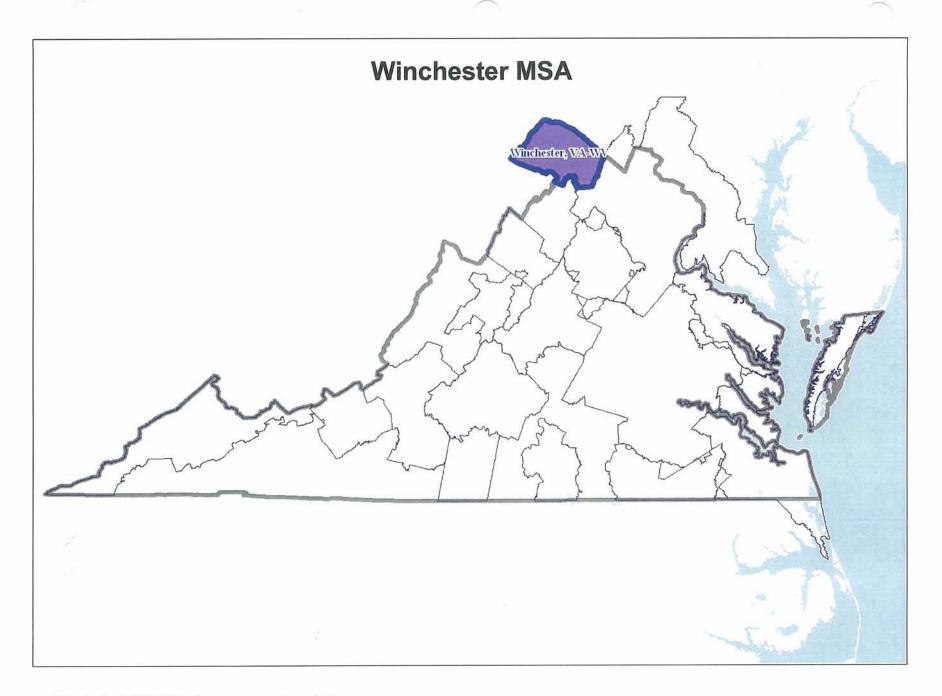


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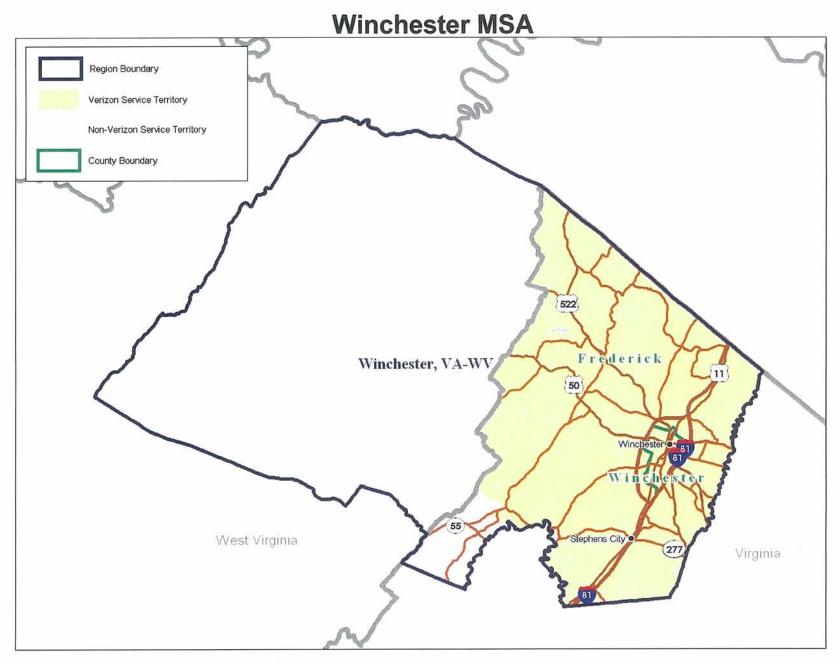


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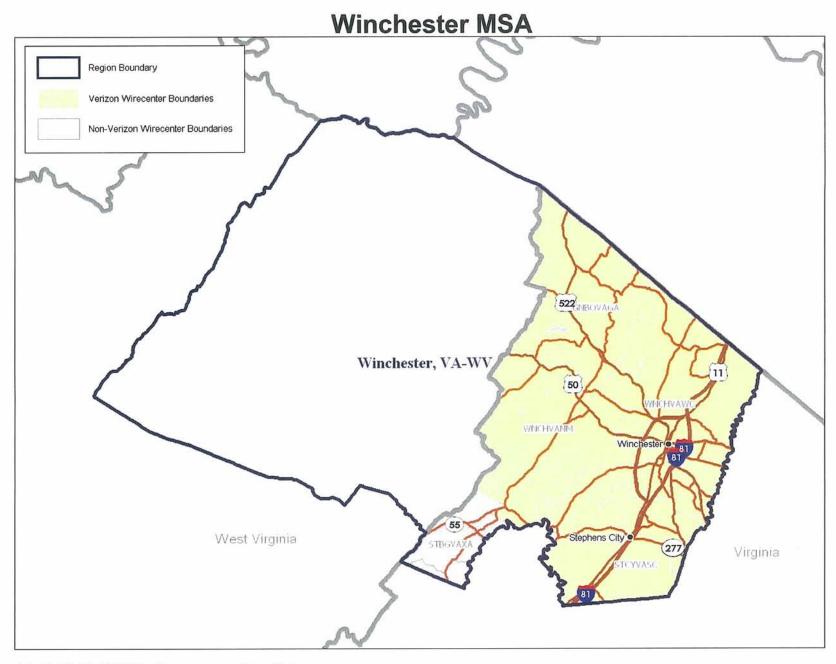


Exhibit WIN-1, page 3 of 3

### COMPETITION AND POTENTIAL COMPETITION FOR RETAIL TELECOMMUNICATIONS SERVICES IN VERIZON'S WINCHESTER MSA SERVICE TERRITORY

Report of Jeffrey A. Eisenach, Ph.D. January 17, 2007

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### I. OVERVIEW

Verizon's service territory in the Winchester MSA consists of 417 square miles, with a population of 94,748 living in 37,497 households as of 2006. Also as of 2006, there were 4,112 business establishments. The average population density is 227 persons per square mile, and the median household income is \$52,375. Verizon operates four wire centers in the region. 3

The Winchester region is located in the 540 area code and in the Winchester MSA. It is wholly contained within Frederick County, Virginia, and is bordered on the North by Maryland, on the West by West Virginia, on the Southeast by the WAA MSA and on the Southwest by an area of Frederick County served by Shentel's STBGVAXA wire center (which serves Strasburg).<sup>4</sup>

The highest density wire center in the region is the Winchester wire center, which has 427 persons per square mile; the lowest density wire center is Gainesboro, which has 63 persons per square mile.<sup>5</sup> The region is bisected by I-81, running Northeast to Southwest, through Winchester and Stephens City, and by State Route 522, which runs from the West Virginia border through Winchester into the WAA MSA.<sup>6</sup>

While much of the Winchester region is relatively rural, competition is widespread and intense. Facilities-based wireline competition is extensive: [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]

Mobile wireless coverage is ubiquitous, and [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL] consider their cell phone to be their primary telephone.

See Exhibit WIN-4.

See id.

<sup>3.</sup> See Exhibit WIN-3.

See Exhibit WIN-4 and http://www.telcodata.us/telcodata/clli?cllicode=STBGVAXA.

See Exhibit WIN-4.

See Exhibit WIN-1.

<sup>7. [</sup>BEGIN CONFIDENTIAL]

While the Comcast cable system (formerly owned by Adelphia) has not yet upgraded to cable telephony, cable modem service is available to 100 percent of the households, and cable telephony will be deployed next year. In addition to cable modem service, more than nine out of ten households and businesses have access to broadband from fixed wireless providers.

There are no barriers to entry. Comcast is expected to roll out cable telephony service throughout the region in the near future. NTELOS is positioned to begin providing wireless broadband services to the region. Access to competitive fiber is available from companies like Cavalier and Continental VisiNet, both of which operate points of presence in the region.

The analysis below of the availability and usage of existing alternative services, and of the conditions associated with potential competition and new entry, demonstrates that competition already regulates the prices of Verizon's retail telephony services in the Winchester region, and that further entry and even more intense competition is a virtual certainty.

### II. AVAILABILITY OF ALTERNATIVE SERVICES

All 37,497 households in the Winchester region and all 4,112 businesses in the Winchester region have the option to obtain alternatives to Verizon's BLETS, OLETS, and Bundled Services from competitive providers. Facilities-based competition is extensive, and includes both traditional CLECs and cable providers, but multiple CLECs also provide services through resale and/or Wholesale Advantage agreements. Mobile telephone service is ubiquitous, as is broadband service.

### A. Traditional CLECs<sup>9</sup>

Traditional CLECs provide robust competition throughout the Winchester region, and facilities-based competition is extensive.

### [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL]

<sup>9.</sup> Here and in the remaining sections of this report, unless otherwise indicated, "traditional CLEC" refers to CLECs other than cable companies. "CLEC" refers to both traditional CLECs and cable companies.

<sup>10.</sup> See Exhibits WIN-15 and WIN-17. The E911 data includes lines that are unable to be assigned to a wire center. These unassignable lines are included in the aggregate competition information. This leads to some under representation of E911 lines when broken out by wire center.

<sup>11.</sup> See Exhibits WIN-14 and WIN-15.

<sup>12.</sup> See Exhibits WIN-4 and WIN-15. It is also true that, based on the reach of CLEC switches located in and around the Winchester region, all 890,156 households and 102,362 businesses can receive service from at least [BEGIN CONFIDENTIAL]

In addition, all households and businesses in the Winchester region can receive service from traditional CLECs through resale and/or Wholesale Advantage services available from Verizon.<sup>13</sup> As of March 2006, [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL]

Altogether, a total of [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL]16

### B. Cable Telephony

Although cable telephony has not yet been deployed in the Winchester MSA, Comcast's infrastructure (purchased from Adelphia) is fully digital and covers 100 percent of the households in the region. Comcast has announced plans to roll out cable telephony in the near future. Once this deployment is complete, cable telephone service will be available to 100 percent of households in the region.

### C. Mobile Telephony

Of the 37,497 households in the Winchester MSA, virtually 100 percent (all but three) have access to at least one wireless provider, and 98 percent have access to two or more carriers. In addition to Verizon Wireless, there are four CMRS providers offering retail telephone services in the Winchester region. They are Cingular, NTELOS, Sprint, and T-Mobile.

There are 23 cellular towers in the Winchester MSA,<sup>20</sup> three of which have been constructed since 2004.<sup>21</sup> There is at least one cellular tower located in the area served by each of the four Verizon wire centers.<sup>22</sup>

See Exhibit WIN-16.

<sup>14.</sup> See Exhibit WIN-15.

<sup>15.</sup> See Exhibit WIN-15.

<sup>16.</sup> See Exhibit WIN-14.

See Exhibit VA-10 and Exhibit WIN-9. Eight out of the 37,489 households in the region are not covered by Comcast.

See West Testimony at 42. See also Comcast, FAQ, https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3804 (last visited Dec. 3, 2006); id. at https://www.comcast.com/Customers/FAQ/FaqDetails.ashx?Id=3807 (last visited Dec. 3, 2006).

<sup>19.</sup> See Exhibit VA-4 and Exhibit WIN-12.

<sup>20.</sup> See Exhibit WIN-10.

<sup>21.</sup> See id.

<sup>22.</sup> Compare Exhibit WIN-3 and Exhibit WIN-10.

### D. Broadband and VoIP

Increasingly, consumers are choosing to combine stand-alone broadband Internet access with VoIP services provided by "bring your own access" companies such as Vonage, thus creating their own bundles of broadband and retail telephony services. Both broadband and VoIP services are available to virtually 100 percent of Winchester households and businesses.

<u>Cable Modem and DSL Service</u>: Comcast offers cable modem service to 100 percent of all residences.<sup>23</sup> In addition, Verizon makes DSL service without voice available to retail customers for \$26.99 a month. DSL service is available to [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of households.<sup>24</sup>

<u>Fixed Wireless Service</u>: In addition to wireline cable modem and DSL service, almost all households (94 percent) have access to fixed wireless broadband services.<sup>25</sup> Providers include:

- Brainstorm Software: Brainstorm offers fixed wireless access to both businesses and residential customers in downtown Winchester, the Stephens City area, Route 50 East business parks and the Apple Pie Ridge.<sup>26</sup> Residential service offers speeds up to 1.1 Mbps (500 Kbps average) for \$59.00 per month. Commercial service is offered for the same price. <sup>27</sup> Brainstorm's web page provides an indication of how quickly and cheaply fixed wireless infrastructures can be deployed. The company indicates that if a customer is not already in its service territory, the customer should "Get 10 of your neighbors to signup for our service and we will do a site survey to test the possibility of installing a Brainstorm Access Point in your location."<sup>28</sup>
- Wave2Net: Wave2Net is headquartered in Winchester and offers fixed wireless broadband services to much of the region. Pricing ranges from \$36.95 per month for WiFi Beginner class service, with symmetrical speeds of 256 Kbps, to \$149.95 per month for WiFi Expert class service, with symmetrical speeds of 1 Mbps.<sup>29</sup> The company's web site reports that "Wave2Net has employed the use of 802.11x wireless technology that can deliver speeds to the Internet up to 100Mb per second and more when needed. By using this technology to bring Internet connectivity to our customers we are able to provide quality services at a very low price."<sup>30</sup>

While the companies discussed above do not offer bundled VoIP service, customers have the option of purchasing alternatives to Verizon's BLETS, OLETS, and Bundled Services from

<sup>23.</sup> See Exhibit VA-10 and Exhibit WIN-8.

<sup>24.</sup> See Exhibit VA-4.

<sup>25.</sup> See id.

Brainstorm Software, Wireless Internet, http://www.brainstormsoftware.com/ (last visited Nov. 28, 2006).

See id.

<sup>28.</sup> See id.

See Wave2Net, http://www.wave2net.com/ (last visited Nov. 28, 2006).

<sup>30.</sup> *Id.* at http://www.wave2net.com/public/about.html (last visited Nov. 28, 2006).

by-pass VoIP companies. VoIP providers that offer telephone numbers with 540 area codes include Net2Phone, Vonage, and Packet8.<sup>31</sup>

### E. Overall Availability of Alternative Platforms and Competitors

Looking overall at the availability of service from alternative platform providers (i.e., from mobile wireless, cable modem, DSL, facilities-based CLECs, and fixed wireless), 100 percent of all households in the Winchester MSA have service available from at least one alternative platform provider and 89 percent have service from four or more alternative platforms.<sup>32</sup>

Similarly, looking overall at the availability of service from all competitors – i.e., the same measure as above, but counting each competitor separately (e.g., counting each CMRS provider separately), competition is even more extensive: 100 percent of households have competitive alternatives from at least two competitors, and 82 percent have access to service from eight or more Verizon competitors.<sup>33</sup>

### III. USAGE OF ALTERNATIVE SERVICES

Verizon's internal data shows that at least [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of wireline telephone lines in the Winchester region were being served by competitors as of March 2006. However, these figures understate the true market share of competitors, since they fail to account for intermodal competition, such as from wireless and broadband.

Survey data indicates that [BEGIN CONFIDENTIAL]

**[END CONFIDENTIAL]** of households subscribe to broadband. Taking intermodal competition into account, the data presented below show that Verizon voice lines now account for only 34.1 percent of all wireline telephony, wireless telephony and broadband connections in the region.

Time series data presented at the end of this section also shows that Verizon's wireline market share is falling, both in proportion to the number of wirelines served and relative to the number of households in the region. Taken together, the data presented in detail below demonstrates that the competitive alternatives described in Section II represent viable alternatives for Verizon's BLETS, OLETS and Bundled Services in the Winchester region, since customers are actually switching to them in large numbers.

<sup>31.</sup> See West Testimony at 81.

<sup>32.</sup> See Exhibit VA-4 and Exhibit WIN-5.

See Exhibit VA-5 and Exhibit WIN-6.

<sup>34.</sup> This figure does not include approximately six percent of the population (who by definition were not reached through Verizon's telephone survey) who have cut the cord altogether. See West Testimony at 63.

### A. Traditional CLECs and Cable Telephony

As detailed in Exhibit WIN-15 a total of [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]36

Since cable telephony is not yet available, it is not surprising that penetration is higher among business customers.

These figures are consistent with the survey data presented by Mr. Newman, which show that **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** of residential customers in the Winchester region are using providers other than Verizon.<sup>37</sup> In small MSAs (including the Winchester region), the survey shows that 20.3 percent of POTS business customers and 29.9 percent of all business customers are using other providers.<sup>38</sup>

Exhibit WIN-15 also demonstrates that wireline competition is ubiquitous throughout the Winchester region. It shows that competitors are actually serving both business and residential customers in [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of the four wire centers in the Winchester region. Furthermore, facilities-based competition is also widespread. Traditional CLECs using only Verizon's last mile facilities are serving customers in [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of the four wire centers. These data demonstrate that alternatives to Verizon's BLETS, OLETS, and Bundled Services from wireline competitors are available and in widespread use by both residential and enterprise customers throughout the Winchester region.

### B. Mobile Telephony

The survey data presented by Mr. Newman shows that [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of households in the Winchester region purchase telephone service from mobile phone companies.<sup>41</sup> [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL]<sup>42</sup>

While Mr. Newman's testimony does not provide data on business usage of mobile telephones specifically for the Winchester region, it does indicate that the proportion of businesses in small MSAs (including the Winchester region) which purchase mobile telephone

<sup>35.</sup> See Exhibit WIN-15.

<sup>36.</sup> See Exhibit WIN-19.

<sup>37</sup> See Exhibit VA-21.

<sup>38.</sup> See Exhibit VA-20.

See Exhibit WIN-15.

<sup>40.</sup> See id.

<sup>41.</sup> See Exhibit VA-21.

<sup>42.</sup> See id.

service is 50.8 percent,<sup>43</sup> and that 15.5 percent of small MSA business respondents consider their mobile telephone to be their primary means of voice communication.<sup>44</sup>

These figures do not include mobile telephone customers who have dropped their wireline service altogether, as these customers were not eligible for the telephone survey. As Mr. West's testimony indicates, national estimates suggest that between approximately six percent of residential customers have "cut the cord."

These figures demonstrate that the mobile wireless alternatives available to consumers in the Winchester region function as actual, viable alternatives to Verizon's BLETS, OLETS and Bundled Services.

### C. Broadband and VoIP

The survey data presented by Mr. Newman show that [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL]46

These data show that Comcast has been highly successful in selling at least the second (data) leg of its triple-play offering in the Winchester MSA, and highlight the competitive challenge facing Verizon as it tries to retain customers in the face of Comcast's anticipated rollout of cable telephony.

The survey data presented by Mr. Newman show that in small MSAs in Virginia (including the Winchester MSA), 59.1 percent of businesses subscribe to high-speed broadband service.<sup>47</sup>

These overall usage rates for broadband also demonstrate that the broadband plus VoIP "build your own bundle" option is available today to [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] of Winchester households and approximately six of ten businesses, which already subscribe to broadband.

### D. Overall Penetration of Wireline and Intermodal Competition

While it is not possible to estimate precisely the number of lines Verizon has lost to wireline and intermodal competitors, it is clear that competition is having a significant impact on Verizon's market share, both in terms of wireline telephony and the overall markets for BLETS, OLETS and bundled services, and that wireline competitors are winning a growing proportion of customers. The data also indicate that intermodal competitors are winning a growing proportion

<sup>43.</sup> See Exhibit VA-20.

<sup>44.</sup> See id.

<sup>45.</sup> See West Testimony at 64.

<sup>46.</sup> See Exhibit VA-21.

<sup>47.</sup> See Exhibit VA-20.

of customers from wireline carriers of all types (i.e., including both Verizon and the traditional CLECs and cable telephony providers).

Both Verizon's line count and its wireline market share in the Winchester region are dropping rapidly. As indicated in Figure 1 below, between December 2003 and March 2006 (i.e., in 27 months), the ratio of Verizon lines to households fell from [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL] 49

During this same 27-month period, the number of total wirelines served by wireline CLECs rose by [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]51

Figure 1 also demonstrates the significance of intermodal competition from wireless telephony and from broadband plus VoIP "build your own" bundles. It shows that the ratio of combined Verizon and CLEC residential lines to households fell from [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]<sup>52</sup> Assuming people have not stopped using voice telephony altogether, these data clearly indicate that wireless and broadband providers are competing effectively with both Verizon and other traditional wireline providers – a conclusion which is consistent with the high rates of wireless telephony usage and broadband adoption as discussed above.

### [BEGIN CONFIDENTIAL]

### [END CONFIDENTIAL]

<sup>48.</sup> See Exhibit WIN-4 and Exhibit WIN-19.

<sup>49.</sup> See Exhibit WIN-19.

<sup>50.</sup> See id.

See id.

See id.

Another perspective on Verizon's loss of overall share is shown in Figure 2 below, which shows the percentage of total connections – including wireline telephony, wireless telephony and broadband connections – served by Verizon, based on the survey conducted by Mr. Newman. As the figure shows, Verizon voice lines now account for only 34.1 percent of all wireline telephony, wireless telephony and broadband connections.<sup>53</sup>

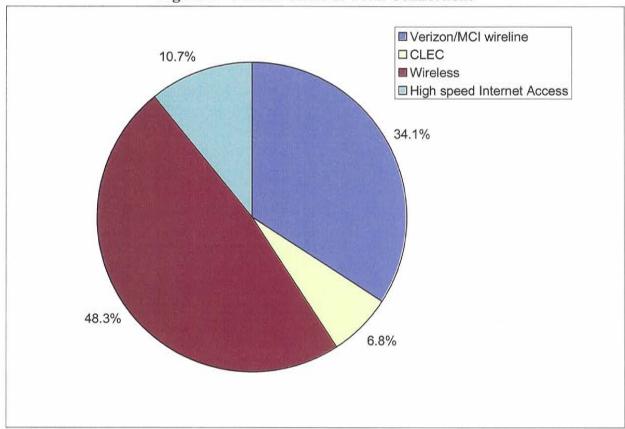


Figure 2: Verizon Share of Total Connections

### IV. POTENTIAL COMPETITON AND ENTRY

While it is clear from the evidence presented above that actual competition already in the marketplace is extensive, even in the absence of additional entry, it is equally clear that entry has occurred, is occurring and is likely to continue occurring in the future. Competition in the Winchester region is thus certain to become even more intense in the coming months and years.

First, Comcast's infrastructure – covering 100 percent of households – is capable of supporting cable telephony, and the company could thus deploy telephone service quickly and for minimal investment. Given the high rate of cable modem penetration in the region, Comcast is well positioned to win a sizeable market share.

<sup>53.</sup> See Exhibit VA-22.

Second, other facilities-based companies are also are well-positioned to expand their offerings. [BEGIN CONFIDENTIAL]

[END CONFIDENTIAL] NTELOS, which has not yet deployed its Portable Broadband service in Winchester reports that it "is currently expanding to many more locations" and has the necessary spectrum in the Winchester region to do so, so well as a point of presence. While Shentel does not currently serve customers in the area, it is a registered CLEC, has a point of presence (through ValleyNet) in Winchester, and currently serves the neighboring Strasburg wire center. If Verizon were to raise prices above competitive levels, Shentel could enter quickly and for minimal fixed investment.

More broadly, barriers to entry in the Winchester region are extremely low. The Winchester region has extensive access to high-capacity fiber optic cable, both long haul and metro fiber, with points of presence operated by Cavalier Telecom, Continental VisiNet, NTELOS and ValleyNet.<sup>56</sup> The widespread presence of cell towers throughout the region (there are towers in all of the wire center areas, and three new towers have been constructed since 2004) means that mobile and fixed wireless entry is also inexpensive. Finally, much of the region is rural and thus potentially eligible for Rural Utilities Service (RUS) funding.

### V. CONCLUSION

Competition for retail telephone services in the Winchester MSA is intense and certain to become more intense in coming years. By every measure, Verizon is already losing customers to traditional CLECs, cable telephony providers and intermodal competitors at a rapid pace, and this decline is taking place *at current prices*. Comcast has announced plans to roll out cable telephony service to 100 percent of households, and is in a position to do so without delay and for minimal fixed investment. If Verizon were to raise prices, it would both accelerate the rate at which it is losing customers to existing competitive services,<sup>57</sup> and increase the rate at which competitors and potential competitors deploy new services in the market. The current state of competition, combined with the imminent threat of region-wide entry by cable telephony and the ability of other actual and potential competitors rapidly to enter or expand their offerings, is fully adequate to regulate the price of Verizon's retail telephone services in this region.

<sup>54.</sup> See NTELOS, Portable Broadband, http://www.ntelos.com/landline/residential/portablebroadband.html (last visited Nov. 22, 2006).

<sup>55.</sup> See NTELOS Holding Company, Form 10K for the Period Ending December 31, 2005, at 10. ("We have access to MMDS spectrum within Virginia through license ownership or long-term leases in Charlottesville, Lynchburg, Roanoke, Harrisonburg and Winchester. In late 2003, we launched a wireless, high-speed internet access service, also known as 'portable broadband,' using this spectrum. This service provides DSL-like internet access speeds without the need for any hardwired connection to the home or business. This service complements the DSL service area in our RLEC regions and expands the number of potential broadband customers in CLEC areas.") (Emphasis added.)

<sup>56.</sup> See Eisenach Testimony at III.B and Exhibit VA-18.

<sup>57.</sup> An analysis conducted by Mr. Taylor estimates that a decision by Verizon to raise prices by 5 percent in the Winchester MSA would result in a *net* revenue loss of [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] annually. See Taylor Testimony Table 14 at 94.

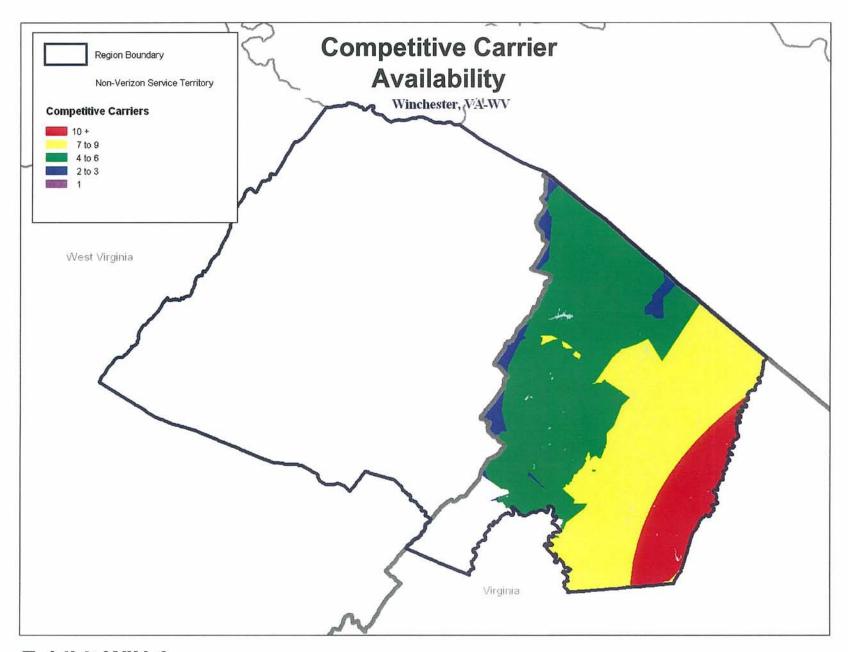
### Wire Centers by Rate Group, Exchange, City and County

REGION	LOC	WIRECENTER	LOCATION NAME	Rate	Exchange	CENTRAL OFFICE CITY	COUNTY
WINCHESTER			GAINSBORO VA				COUNTY
MINORILOTER					GAINESBORO	GAINESBORO	Frederick
	1 1		STEPHENS CITY VA	05	STEPHENS CITY	STEPHENS CITY	Frederick
		WNCHVANM	NORTH MOUNTAIN VA	05	GORE/WINCHESTER	WINCHESTER	Frederick
		WNCHVAWC	WINCHESTER VA	05	WINCHESTER	WINCHESTER	Winchester City

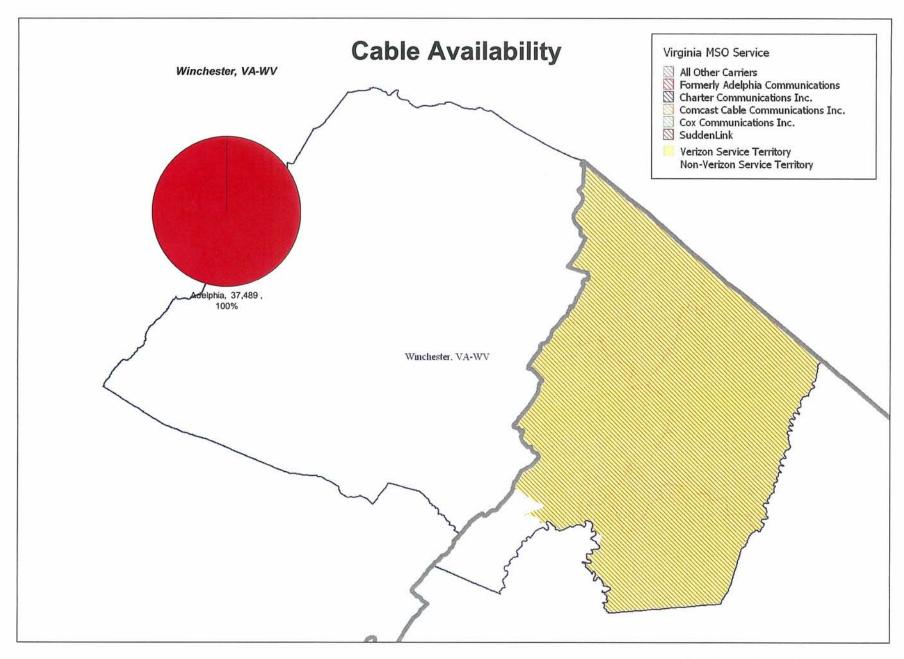
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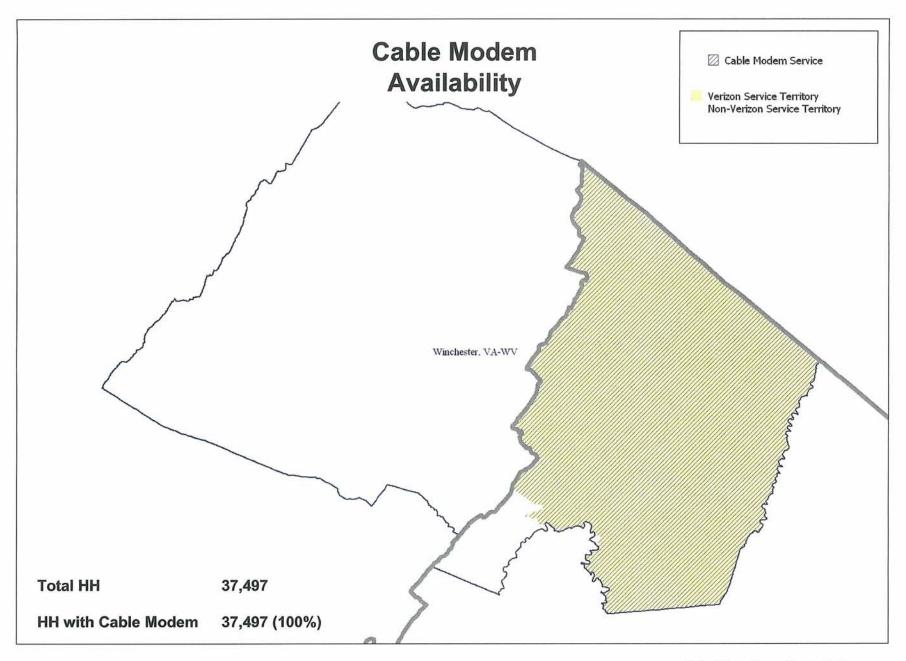
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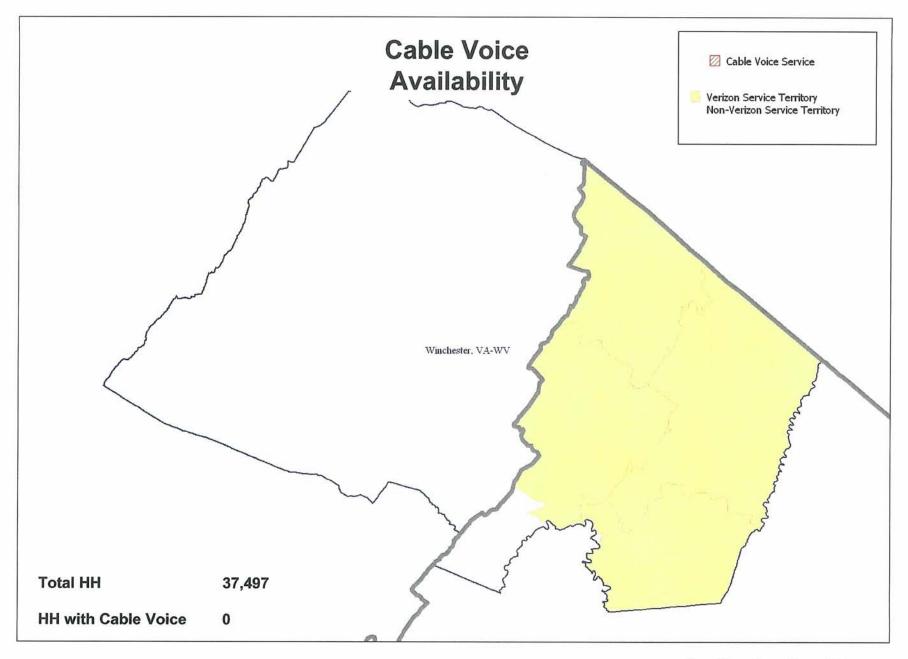
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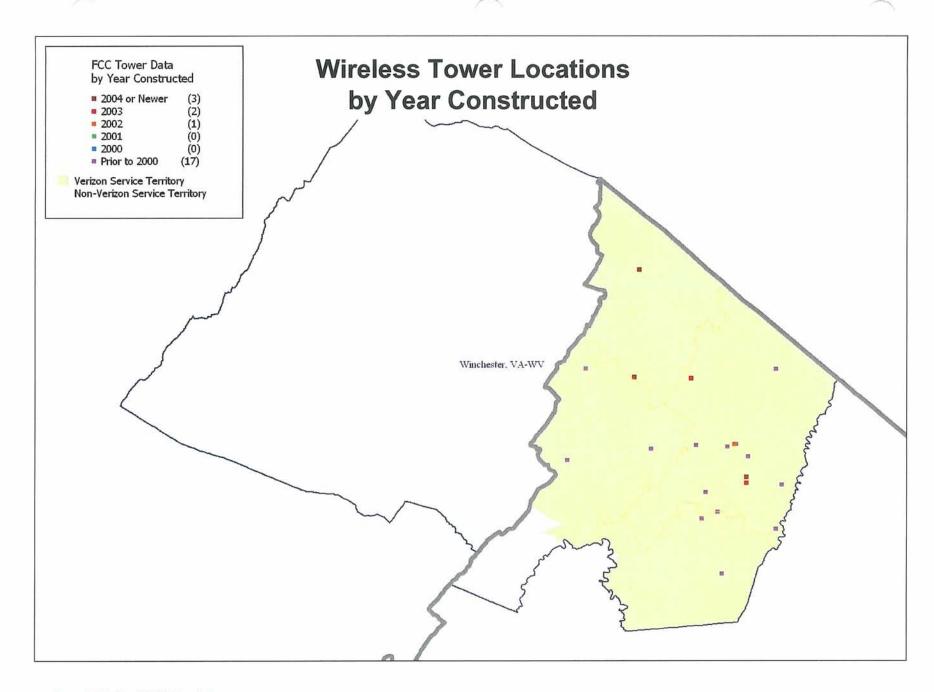


**Exhibit WIN-6** 









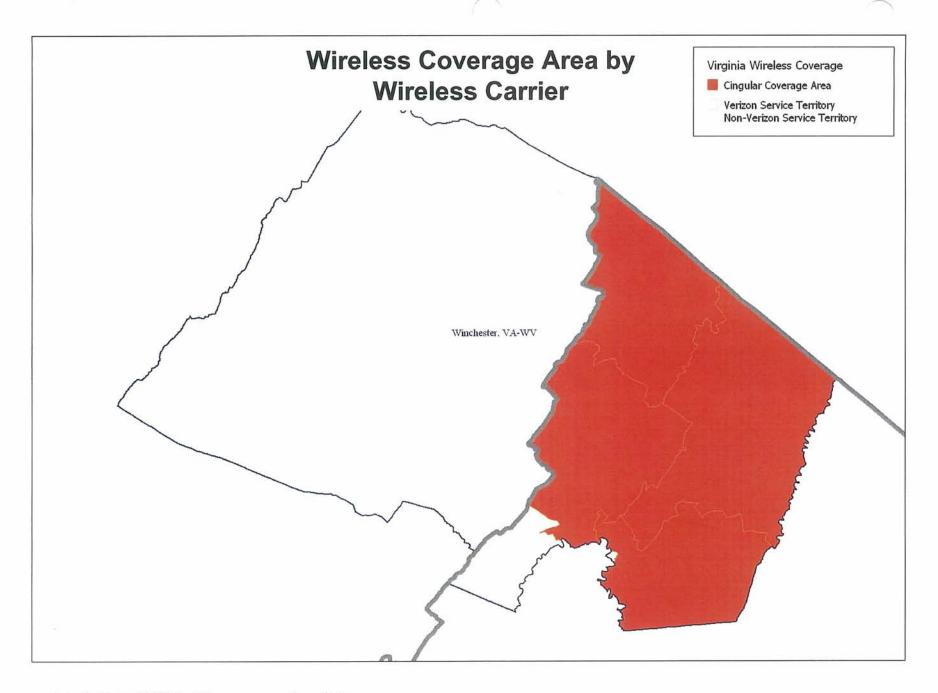


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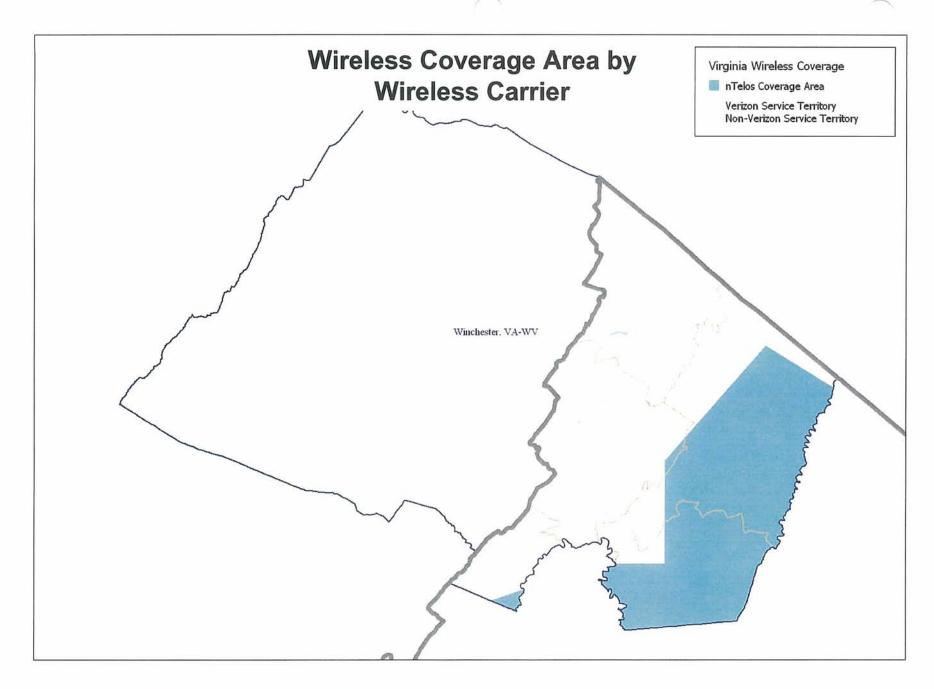


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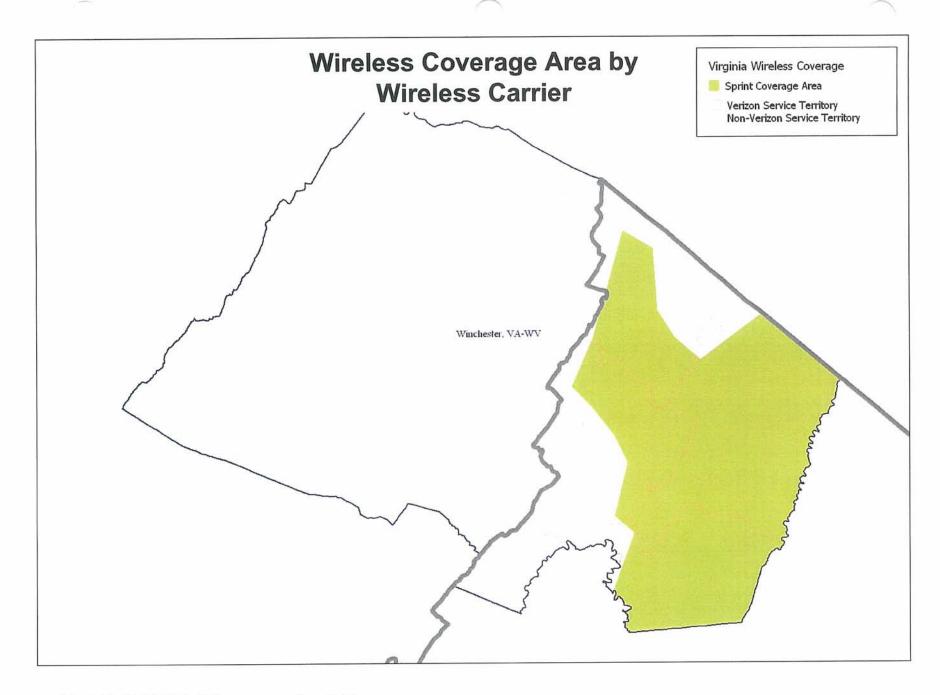


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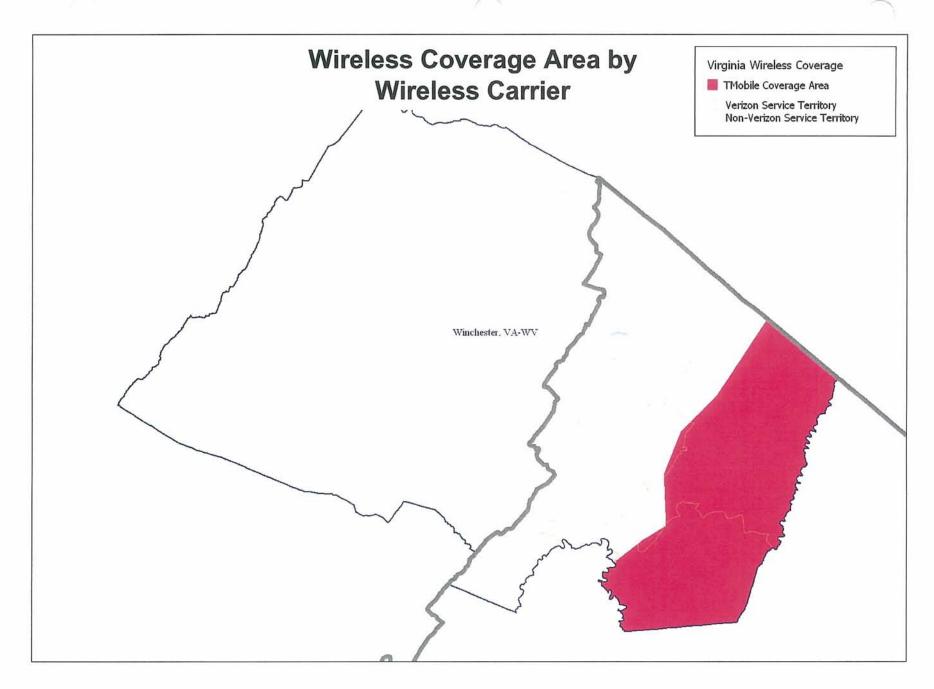


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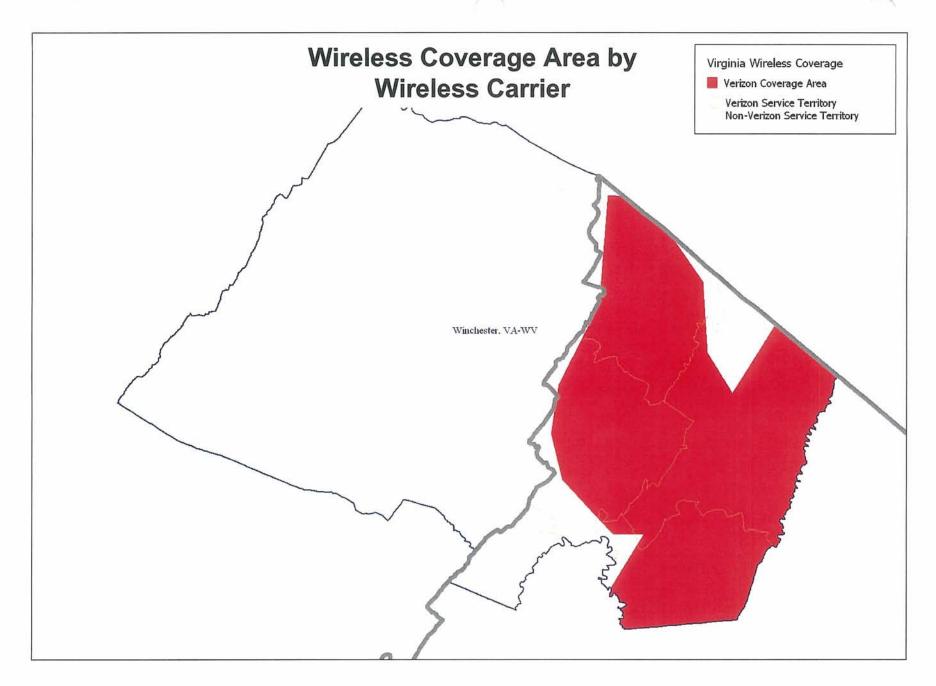
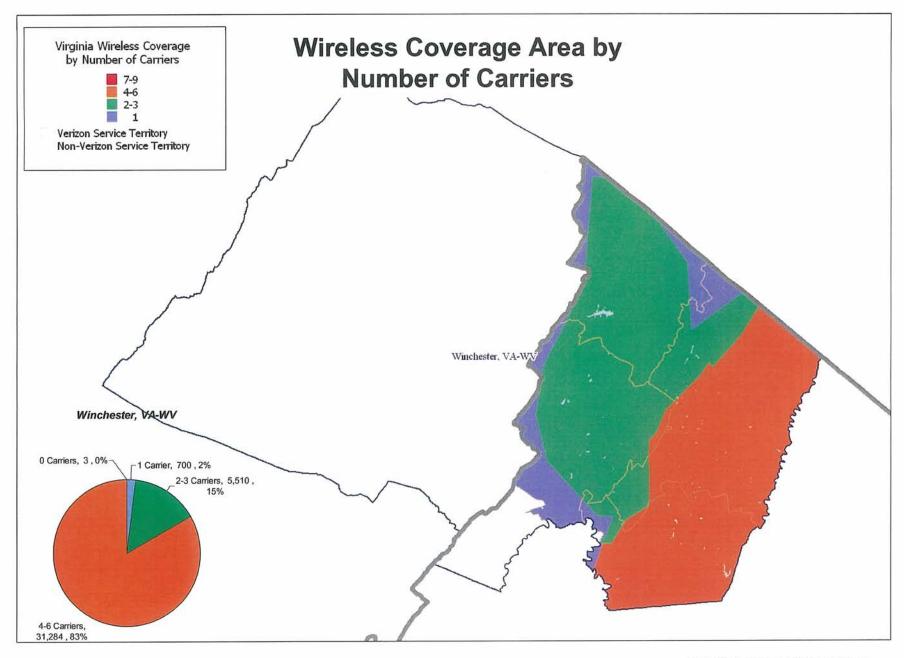
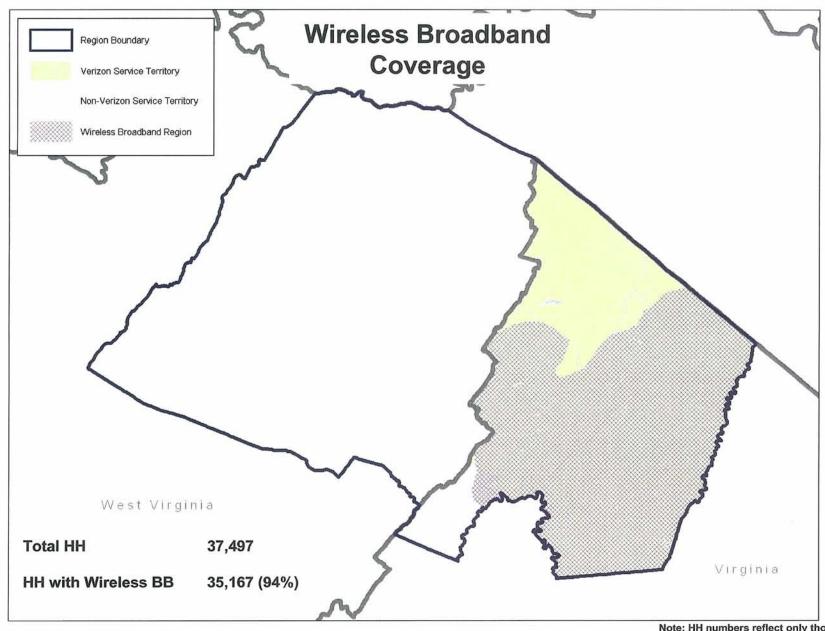


Exhibit WIN-11, page 5 of 5





# CONFIDENTIAL EXHIBIT WIN-14

## CONFIDENTIAL EXHIBIT WIN-15

# CONFIDENTIAL EXHIBIT WIN-16

# CONFIDENTIAL EXHIBIT WINTER

# CONFIDENTIAL EXHIBIT WINTS

## CONFIDENTIAL EXHIBIT

# CONFIDENTIAL EXHIBIT WINIA